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Please do NOT give my name, etc. to any other organizations.

Thank you for your much needed attention

Antibiotic Resistance: A Grave Threat to Human Health

By Dr. Rebecca J. Goldburg, EDF ecologist in the New York office.

Imagine that you accidentally cut yourself. The cut becomes infected. No one can treat the infection, and it moves into your bloodstream. You become extremely ill and die.


Rebecca Goldburg

Dying from a cut seems highly unlikely to most Americans today. But it was a frightening possibility only 60 years ago, before the development of antibiotic drugs. In the near future, as more and more disease-causing bacteria become resistant to treatment by antibiotics, some bacterial infections could again become untreatable.

For example, more than 90% of strains of *Staphyloccous aureus* bacteria, a common cause of hospital Staph infections, are now resistant to penicillin. More than 30% are resistant not only to penicillin but also to every other antibiotic used to treat Staph infections—except one, vancomycin. Now a vancomycin-resistant strain of Staph has emerged, which is untreatable (but, luckily, still rare). Last year in New York, a man in his 70's died after being infected by vancomycin-resistant Staph.

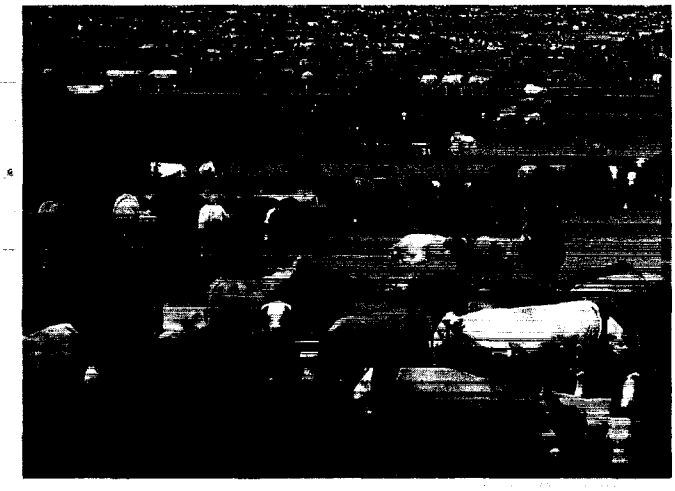
Even when antibiotic-resistant infections are not deadly, they are costly to treat and debilitating to patients. Doctors now must often treat patients with a series of antibiotics before finding one that is effective.

The Problem: Overuse of Antibiotics

Bacteria develop their antibiotic resistance as an evolutionary response to the widespread use—and overuse—of antibiotics. Human medicine is the major user of antibiotics, but not by much. Farmers actually use more than 40% of all antibiotics sold in the United States today. Both sectors need to reduce the use of antibiotics.

In human medicine, doctors too often prescribe antibiotics imprudently, such as when patients with colds demand them. (Colds are viral infections against which antibiotics have no effect.) Antibiotics should be prescribed only when medically necessary.

About 80% of the antibiotics used in agriculture are added to poultry, hog, and cattle feed, not to treat sick animals but to promote growth and prevent disease. This indiscriminate and non-essential use of antibiotics in agriculture dangerously increases the possibility that these antibiotics (and other closely related ones) will be ineffective when needed to treat people.


Phillip Wallick/Int'l Stock

Cattle and other farm animals such as hogs and poultry are routinely dosed with antibiotics to promote growth and prevent disease.

Overuse of antibiotics in agriculture has led to serious antibiotic-resistance problems in foods. Strains of *Salmonella* and other disease-causing organisms found in raw and undercooked meat are increasingly resistant to several antibiotics. One strain of *Salmonella* that is resistant to five different antibiotics increased from 0.6% of specimens tested in 1980 to 34% in 1997.

Because of these increasing levels of resistance, a relatively new class of antibiotics, the fluoroquinolones, has become the top choice for treating life-threatening *Salmonella* infections. But these drugs could also be lost to resistance. Despite strong opposition from the Centers for Disease Control and Prevention, the Food and Drug Administration (FDA) approved use of fluoroquinolones for poultry in 1995. In Britain, use of fluoroquinolones on animals has already led to resistant *Salmonella*.

U.S. Lags Europe in Curtailing Antibiotics on Farms

Few people would choose to allow drugs to be robbed of their life-saving effectiveness in exchange for small benefits to agribusiness, particularly for non-essential uses such as promoting weight gain in farm animals. Sweden banned all non-therapeutic use of antibiotics in agriculture in 1986, and the country has evolved a highly successful system of meat production that does not depend on these drugs.

A 1997 World Health Organization report recommended ending the use in animal feed of all antibiotics used in human medicine, as well as closely related drugs. In an initial response, the use of four antibiotics in animal feed was banned throughout Europe last year.

The U.S. government, unfortunately, has been reluctant to reduce the widespread use of antibiotics in agriculture. In the 1970's, the FDA proposed to ban certain uses of penicillin and other antibiotics in animal feed. The proposals raised a storm of protest from legislators representing agribusiness interests, and they were never made final. Since then, health threats from antibiotic-resistant bacteria have continued to mount. As more and more people suffer infections that are difficult to treat and occasionally deadly, these problems are approaching a crisis stage.

EDF has gathered the support of more than two dozen organizations to urge FDA to strengthen its proposal on limiting new uses of antibiotics in agriculture. Even though FDA's current proposal is far too weak to protect human health, it has already been strenuously attacked by the pharmaceutical industry and agricultural interests.

Furthermore, it is not sufficient merely to limit *new* uses of antibiotics. The current overuse of antibiotics both in human medicine and in animal feeds must be quickly curtailed. EDF has joined several prominent public interest organizations in petitioning FDA to revoke its approvals for existing uses of six antibiotics in animal feed, consistent with the recommendations of the World Health Organization and the Centers for Disease Control.

WHAT ARE WE DOING TO HARPEN?

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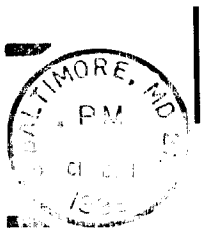

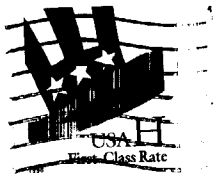

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